NUCLEAR DIVISION NEWS

UNION CARBIDE

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 2 — No. 12 OAK RIDGE, TENNESSEE Thursday, June 17, 1971

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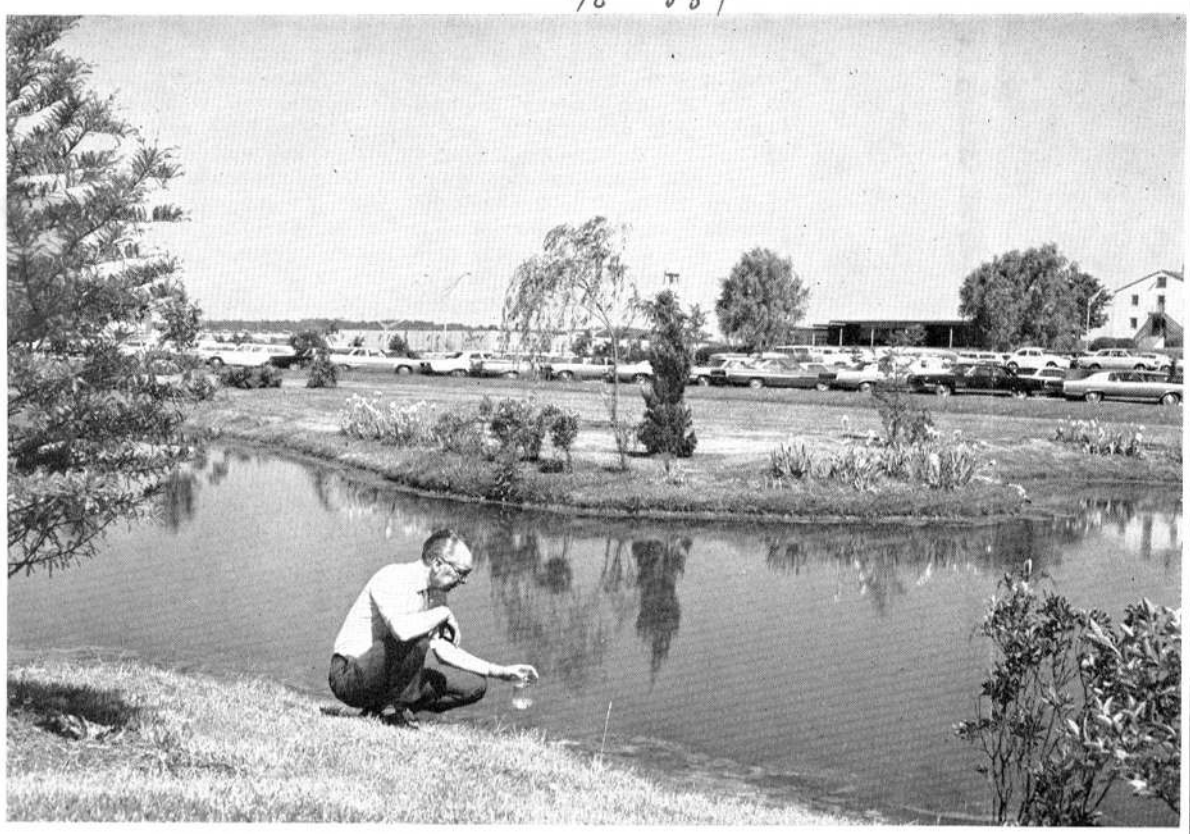


PLANT PICTURE MAKES GOOD!—The Oak Ridge Gaseous Diffusion Plant picture appeared in the 1970 Report to Congress. The caption reads: 'Although Air and Water Pollution Abatement at Government installations is now required by presidential executive order, the AEC, because of the hazardous nature of the materials with which it works, has long made pollution abatement a major factor in its operations. In the photo above, a water sample is being taken from a pond near ORGDP to check the sediment for potential accumulation and reconcentration of contaminants.' L. H. Sipe, Safety, Health Physics and Industrial Hygiene, is the employee taking the water sample.

ORGDP Earns Only 'Minuteman Flag' In Current U. S. Savings Bond Drive

The Oak Ridge Gaseous Diffusion Plant will be awarded a "Minuteman Flag" by the U. S. Treasury Department for achieving more than 50 percent participation in the U. S. Savings Bond payroll savings plan.

The final report for the May-long drive at Nuclear Division facilities shows that ORGDP has 566 new participants in payroll savings. Total participation at the plant is now 1,160, or 53.9 percent of the plant population.

While no other facility achieved 50 percent participation, all showed significant increases in payroll savings. Total participation at Nuclear Division facilities is now 5,447, with 1,917 new payroll savers reported during the past month. The breakdown for participation is as follows:

Facility	Savers at Start of Drive	New Savers	Total
General Staff	166	139	305
ORGDP	594	566	1,160
ORNL	1,107	482	1,589
Paducah	264	180	444
Y-12	1,399	550	1,949
Totals	3,530	1,917	5,447

W. E. Williams, chairman of the payroll savings drive, attributed the success of the project to the division coordinators and their teams. At the Oak Ridge Gaseous Diffusion Plant, nine of the twelve divisions exceeded the 50 percent participation level. These divisions include: Laboratory, Separation Systems, Industrial Relations, Fabrication and Maintenance, Finance and Materials, Plant Superintendents, Engineering, Operations, and Shift Operations and Security.

Setting the pace in General Staff was General Accounting, which had 70.6 percent participation. The Systems and Procedures Department in General Accounting had 100 percent participation.

In Sixth Year

Fifty-Two Youth Participating In Summer Job Opportunities

Fifty-two young people from 16 communities will work this summer under the Youth Opportunity Program at the four facilities operated by Union Carbide Corporation for the U. S. Atomic Energy Commission.

The Youth Opportunity Program is for persons between the ages of 18 and 21 who are high school graduates or students planning to continue their education either in college, business, vocational or training schools.

Plant Numbers

Sixteen participants will work at the Oak Ridge Gaseous Diffusion Plant, and a similar number will be assigned to the Oak Ridge National Laboratory. The Oak Ridge Y-12 Plant and the Paducah Gaseous Diffusion Plant will employ 10 each.

A breakdown of participants by community is as follows: Knoxville, 14; Paducah (Ky.), 10; Oak Ridge, 7; Clinton, 3; Sweetwater, 3; Harriman, 2; Lenoir City 2; Oliver Springs, 2; Powell, 2; and Alcoa, Athens, Kingston, Lancing, Loudon, Philadelphia and Rockwood, one each.

This is the sixth year that Union Carbide's Nuclear Division has participated in the program. Early this year, Union Carbide's Central Employment staff members worked with guidance counselors in several counties to find suitable candidates for the program.

This year's participants, their home towns, and the plant to which they will be assigned are as follows:

Valerie Haszleton, ORGDP, Alcoa; Paul Swafford, ORNL, Athens; Mary J. Collins, Charles Ellis and Donald D. Martin, all to ORNL, all from Clinton; Spencer Anderson and William Rowan, both to ORGDP, both from Harriman; Ricky Forbes, ORGDP, Kingston; Randall Allen, Clyde Anderson, Brenda Bonner, Marlyn Carrington and Joseph C. Coleman, all from Knoxville, all to ORGDP; Donna Craig, Doris Elder, Andre Essie and Frederick McGinnis, all from Knoxville, all to ORNL; Sara J. Townes, George E. Upton and Beverly J. Wilson, all from Knoxville, all to Y-12.

Joseph L. Sexton, to ORGDP, Lancing; Jo Ann Johnson, Y-12, Lenoir City; Paul Walker, ORNL, Lenoir City; Daniel C. Johnson, ORGDP, Loudon; Carolyn Hawkins and Ruby Lee Jones, Y-12, both from Oak Ridge; Melvin Kirk, Thomas Moton, Pamela Potter and George Royster, all from Oak Ridge, to ORGDP; and Robert K. Weaver, ORGDP, also from Oak Ridge.

Stevie Seiber and Timothy Yarborough, both to ORNL, both from Oliver Springs.

Vivian Cawthon, Carla Cole, Terry Garrett, Denise Holt, Adele Powell, Janet Reeves, Eddie Spearman, Denise White, Bryan Williams and Ronnie Yates, all to PGDP, all from Paducah. Marion Rathledge, Y-12, Philadelphia; Gary L. Atwater and Eugene Gallaher, both to ORGDP, both from Powell.

Sharon Beaird, ORNL, Rockwood. Margaret McCroskey, Ora McCroskey and Connie McGaughey, all to Y-12, all from Sweetwater.

Changing Times

Out with the old . . . in with the new.

With this issue, the "old" **Nuclear Division News** becomes a thing of the past. However, the "new" News will appear as an eight-page publication. It will be published every three weeks.

The new publication will include news from all four facilities—Oak Ridge Gaseous Diffusion Plant, Oak Ridge National Laboratory, Oak Ridge Y-12 Plant and the Paducah Gaseous Diffusion Plant.

James A. Young will be editor of the **News.** Martha Goolsby, Oak Ridge National Laboratory, will be associate editor.

The new publication takes the place of the Carbide Kentuckian, ORNL News, Y-12 Bulletin and The Carbide Courier.

Uranium Shipments Exceed $6 Million

More than 110,000 pounds of enriched uranium, valued at $6,591,000, was shipped by the Oak Ridge Gaseous Diffusion Plant during May.

The enriched uranium is for use in nuclear reactors located in Illinois, Pennsylvania and South Carolina. It filled orders authorized under the Atomic Energy Commission's Toll Enrichment Program.

Three additional requests for toll enrichment services were received during May. These requests call for the future delivery of 24,368 pounds of enriched uranium, valued at $3,178,900, to reactors in Illinois, South Carolina and Sweden.

TVA Applies to AEC for Reactor Permit For Power Plant Set for Watts Bar Site

The Tennessee Valley Authority has applied to the Atomic Energy Commission for permits to build a two-unit nuclear power plant at its Watts Bar site in Rhea County, Tennessee.

Each unit would use a pressurized water reactor with a net electrical capacity of 1,169,000 kilowatts. TVA hopes to begin construction by August of 1972 with full power operation of Watts Bar Nuclear Plant Unit 1 planned for August 1976 and Unit 2 for May 1977.

TVA will design, build and operate the plant. The total cost of the two units is estimated to be $625 million, not including initial fuel inventory. Westinghouse Electric Corporation will provide the nuclear steam supply systems and turbine generators.

The 1,770-acre site is located on the west bank of the Tennessee River seven miles southeast of Spring City and about midway between Chattanooga and Knoxville. A hydroelectric plant and a coal-fired steam plant already are in operation at the site.

The applications for a construction permit for each of the two units at Watts Bar will be reviewed by the AEC regulatory staff and by the Commission's Advisory Committee on Reactor Safeguards. Before a determination is made on the application, a public hearing will be held in the vicinity of the proposed facility.

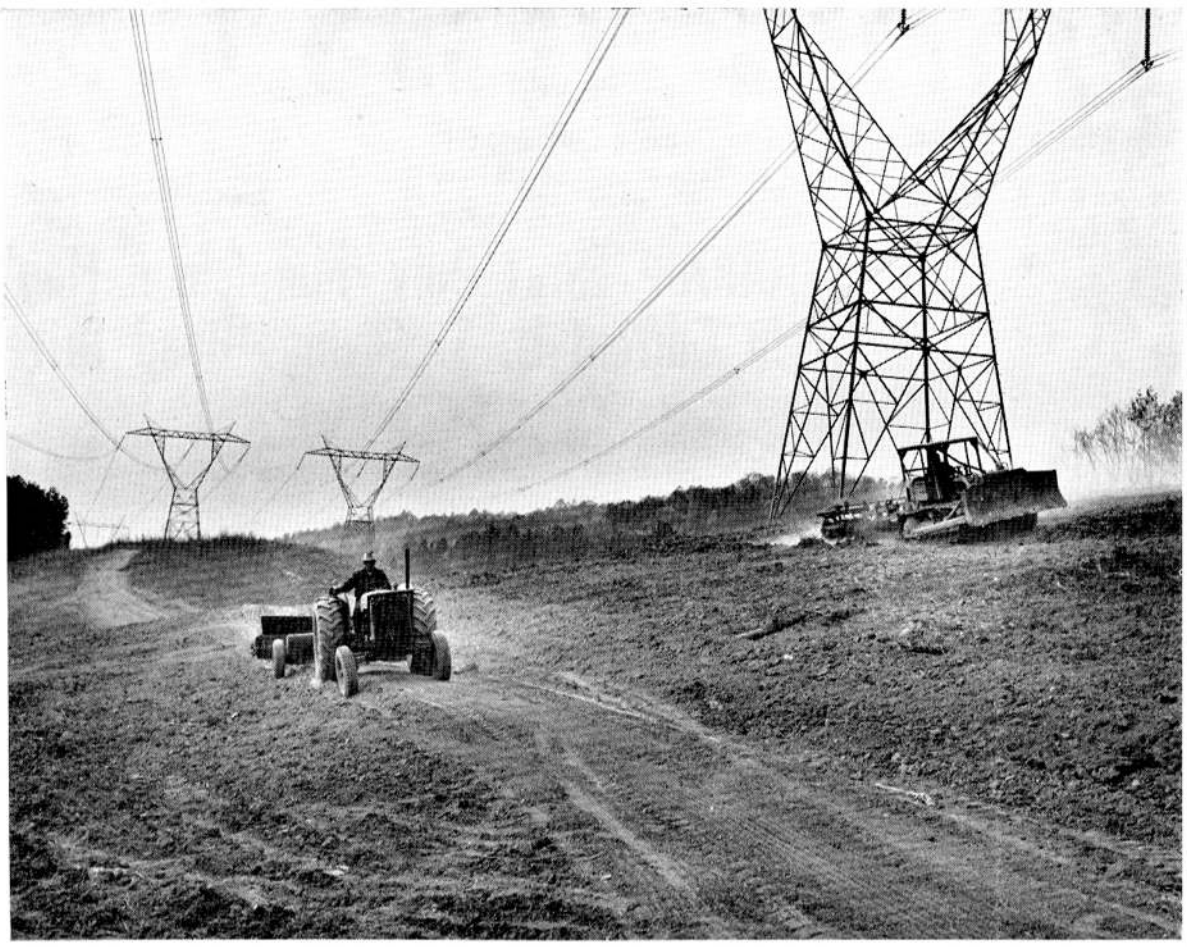
Copies of the application are available for public inspection at the AEC Public Document Room, 1717 H Street, N.W., Washington, D. C.

'Glad' Plant Is Set By UCC in Germany

Union Carbide Corporation has begun construction on a $3.3 million plastic films plant in Alsdorf, Germany. The new plant will produce polyethylene bags and wrap for the corporation's well-known line of Glad household plastic products to supply the major markets of the European Common Market and the European Free Trade Association. It will be the first Union Carbide plant to produce Glad products in Europe and represents the seventh recent expansion of films capacity worldwide.

Scheduled for completion in the first quarter of 1972, the plant will be operated by Union Carbide Deutschland G.m.b.H., a wholly owned subsidiary of Union Carbide. This company, formed in 1964, operates cryogenic, electric welding, electronic components, and industrial gas production facilities. It is also engaged in the design, engineering, and marketing of distillation tray separation equipment for the chemical industry. In addition, it markets process chemicals, carbon products, plastics, and coatings intermediates produced by other Union

(Continued on Page 6)



RIGHT-OF-WAY IMPROVEMENTS—Craftsmen cultivate the land under the Tennessee Valley Authority power lines for ecological improvements. Grass has been seeded on the rights-of-way to make feed for small animals and birds of the area. Deer are expected to graze on the many tracts throughout this area, too.

Joint TVA-ORNL Efforts To Improve Rights-of-Way

A new cooperative environmental project has been started to attract more abundant wildlife and to enhance the scenic beauty of vegetation growing under high-voltage electrical transmission lines crossing Government-owned property in Oak Ridge.

The long-term project involves the combined efforts of the Atomic Energy Commission, the Tennessee Valley Authority, and the AEC's Oak Ridge National Laboratory, which expects to gain valuable ecological research data.

TVA work crews with special equipment have just completed planting some 2,000 pounds of an experimental mixture of western grassland seed, on approximately 55 acres underlying TVA's 500,000-volt Bull Run Steam Plant-to-Nashville transmission line where it crosses AEC-controlled property in Oak Ridge.

Joint Undertaking

The Oak Ridge project is an outgrowth of TVA's new multiple-use approach to transmission line management. By clearing to ground level and planting in grass, the rights of way become productive for agriculture and wildlife habitat is improved. At the same time, the new procedure holds to a minimum both the use of herbicides and the need for repeated clearing.

Except where the nature of the terrain makes it impracticable, the entire 183-mile Bull Run-Nashville stretch will be treated in this way. The AEC-TVA-ORNL experimental program involves the nine and one-half miles that pass through the AEC properties.

'Reduce Erosion'

The Oak Ridge program is being coordinated by Roger C. Dahlman and Paul B. Dunaway, both of ORNL's Ecological Sciences Division, and by E. V. Raffalovich of TVA's Power Construction Division and Dale K. Fowler of TVA's Fisheries, Forestry and Wildlife Division.

Dahlman said that specific advantages offered by the new restoration practices are that "... erosion will be reduced, wildlife habitat will be improved and intersections with public areas such as roads, homes, offices, etc., will be beautified."

To Improve Habitat

ORNL will study the success of planting western grasses which are more nutritious than fescue mixtures normally planted under the transmission lines and are hoped to provide improved forage and cover for more diversified wildlife. The 2,000 pounds of grass just planted at Oak Ridge were purchased by ORNL and include mixtures of two switchgrasses, two blue stems and an Indian grass, all native warm season grasses which formerly grew in parts of Tennessee and Kentucky.

"If these grasses can successfully compete with native shrubs on power lines and in circumstances of minimal management effort," according to Dahlman, "then new and more nutritious types may be planted on transmission lines to improve wildlife habitat and pasture quality."

Eleven plots, ranging from two and one-half acres to more than 11 acres, make up the experimental grass project which stretches under the power line from its crossing on Bethel Valley Road to its intersection with the Oak Ridge Turnpike (Highway 95) at Blair Road.

Operations Described

TVA's new method of clearing transmission line right of way is to shear-clear and grass the full length of each line at the time it is built, except for sections of line where steep slopes, heavy outcroppings of rock, or swamps make it impractical.

A bulldozer equipped with special blades clears the right of way, uprooting small stumps and cutting off larger stumps at ground level or below. After each section of the right of way is cleared and the transmission line on it is completed, the right of way is disked thoroughly to a depth of six inches. Fertilizer is then spread and cut in to a depth of two inches. Then, special tractor-pulled seeding machines plant, cover, and roll the seedbed.

Deer, Other Animals

Some of the wildlife which will benefit from the open land areas of the experimental project are bobwhite quail, cottontail rabbit and various species of songbirds and small mammals. White-tailed deer, rabbit, birds, and small animals are expected to forage in the forested areas of the transmission line project. Greater numbers of these animals should occur as a result of improved habitat on the experimental areas.

Low-growing food and cover plants, such as dogwood, bi-color lespedeza, and redbud, will be planted in some plots. In other test areas, wildlife habitat will be developed by selectively removing unwanted vegetation and leaving beneficial wildlife plants. In addition to providing food and cover for wildlife, the plants will improve the landscape's looks.

ORNL will assume complete responsibility for managing the designated areas, and in cooperation with TVA will study both the growth success of the experimental grasses and its value as wildlife food and cover plants.

NEWS

Published Bi-Weekly For The Employees Of UNION CARBIDE CORPORATION NUCLEAR DIVISION

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UNION CARBIDE

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International Association of Business Communicators

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Counterfeit Metal Shows Its Worth to Researchers

Counterfeiters in Colorado are operating in the open, but the FBI isn't worried. Why? Because no one is really breaking the law. The counterfeiters are members of a research and development team assigned to a special project at the Atomic Energy Commission's Rocky Flats plant.

The R & D team is trying to change the appearance of aluminum to make it look like other metals. Their results are used in building models of nuclear components which AEC contractor, Dow Chemical, manufactures at Rocky Flats.

Painting Doesn't Do It

Because it is light and easy to handle, model designers at Rocky Flats decided to use aluminum to build their models which are used for demonstration purposes and to determine design criteria. For the sake of realism, however, it became necessary to make the color of each piece of aluminum in the model match the color of the real metal in the finished product. To simulate the color of surface oxidation on the various metals used in the models required over 13 colors. The number of colors continues to increase to meet new requirements.

Painting does not do the job adequately—it peels, it scratches and its thickness is difficult to control.

At first the team thought they had an easy job. Coloring metal with basic colors is easily done through a process called anodizing and dyeing. But the staff soon found that the model builders wanted more shades than are normally produced. The team set out to develop and find other ways of coloring metal.

Dyeing-Anodizing

Overly simplified, the technique the team developed involves dyeing and anodizing the metal in such a manner that the color looks like it is really part of the metal, not like the superficial effect painting gives. When aluminum is dyed with this new process, the color cannot be removed by washing or rubbing, and is even resistant to bleaching by the sun.

Other applications for the metal dyeing treatment have developed since its original success as a way to create "counterfeit" metal colors.

Metals treated with the process become more resistant to corrosion, thus, maintenance requirements at Rocky Flats were reduced where treated metals were used.

Because the treated metal has no combustible paint finish, there is an added safety factor where it is used.

Only Guidelines

And, because the treated metal acts as an insulator, there are cost savings where it is used in place of extra insulating materials at Rocky Flats.

Tom Blatter, R & D specialist, is the man principally responsible for developing the process now in use. "It's an art," he explains, "to duplicate the coloring of a metal by dyeing. A lot of considerations are involved: the type of aluminum being used, proper cleaning of the metal, the surface smoothness and configurations, inconsistencies in anodizing and dyeing, and the sealing process. No exact procedure can be written down to obtain the desired colors every time," he adds, "only guidelines. Experience and sound personal judgment are the most critical factors in overcoming these variables."

New Jersey Waste Treatment System To Utilize Union Carbide Unox Design

A unique secondary waste treatment system that greatly improves wastewater quality will be installed by the Middlesex County (New Jersey) Sewerage Authority serving three populous central New Jersey counties — Middlesex, Somerset and Union. The Authority announced today that it will employe Union Carbide Corporation's oxygen-enriched secondary waste treatment system in a new 120 million gallon-per-day wastewater treatment plant to be built at Sayreville, N. J., about 20 miles from Manhattan.

Union Carbide's Unox system uses oxygen rather than air to improve the biological degradation of sewerage in the widely-used activated sludge treatment of wastewater. The decision to use the Unox system followed an extensive five-year study by the Authority of the County's wastewater treatment needs and various types of secondary treatment systems. The studies, including an on-site demonstration of the Unox system, were conducted by the Authority and its consulting engineering firm, Metcalf and Eddy, Inc., of Boston.

The new facility is now under design, with construction expected to start early next year. Completion is scheduled for 1974.

The most common secondary wastewater treatment approach in the United States is the activated sludge process, where the oxygen in atmospheric air is used to feed bacteria which break down organic wastes biologically. The technique utilized is to force air into large, open tanks which hold a mixed-liquor solution following primary treatment. After several hours, the treated water is released to other parts of the waste treatment plant or directly to a receiving body of water.

The Unox oxygenation system, introduced commercially in early 1970, uses covered tanks and multi-stage treatment, and provides several improvements over standard air aeration systems. Capital costs are less because the system handles waste three to four times faster, thus reducing land and tankage requirements. Operating costs are minimized because electrical power requirements are reduced by one-third, and less excess sludge is generated. Operating problems are minimized because of the system's resistance to sudden changes in the oxygen demand loading of the sewage. And the odor usually associated with secondary treatment is virtually eliminated.

The Unox system is being designed into over 15 other municipal and industrial waste treatment plants ranging in capacity from 1.5 million gallons per day to 300 million gallons per day. Well over one billion gallons of wastewater will be treated by the Unox system by the end of 1974.

UNION CARBIDE

—Y-12 BULLETIN

Thursday, June 17, 1971

6-14985

Y-12 Milestones

Mid-year finds more Y-12ers enjoying 'big days' with Union Carbide Corporation. Congratulations.

25 YEARS

Norman G. Jarvis, Quality Assurance, June 19.

James F. Morehead, Jr., Radiation Safety, June 21.

Ralph E. Redmon, Buildings, Grounds and Maintenance Shops, June 23.

James W. Charles, Jr., Production Analysis, June 24.

20 YEARS

Lester C. Love, General Machine Shop, June 18.

Samuel L. Newton, Machine Maintenance, June 18.

Clinton A. Queen, Material Transfer and Packing, June 18.

Lorene S. Jones, Production Assay, June 18.

Buford R. Spradlen, Research Services, June 20.

Oscar H. Cutshaw, Area 5 Maintenance, June 20.

Paul H. Abston, Dispatching Department, June 20.

Samuel K. Ray, Stores Department, June 21.

Austin M. Read, Public and Technical Information, June 22.

William A. Farmer, Product Information Center, June 22.

James M. Schreyer, Chemistry Development, June 22.

John A. McKenney, General Machine Shop, June 23.

Charles D. Bennett, Research Services, June 25.

Harvey L. Garrett, Area Five Maintenance, June 25.

William D. Brock, Electrical and Electronics, June 25.

Nicholas J. Tronolone, Jr., Utilities Administration, June 25.

Max M. Carty, Research Services, June 25.

Troy J. Anders, Electrical and Electronics, June 25.

Wallace F. Carden, Production Assay, June 25.

Edwin R. Robinson, Buildings, Grounds and Maintenance Shops, June 25.

Jake B. Dodd, Buildings, Grounds and Maintenance Shops, June 25.

James H. Wiley, Assembly Operations, June 25.

Louie R. Brooks, General Machine Shop, June 26.

Milton Jennings, General Expediting and Auxiliary Services, June 26.

Owen P. Killeen, Production Assay, June 26.

Howard M. Davis, Process Maintenance, June 27.

Winnith R. Malcolm, Research Services, June 27.

Howell G. Simerly, Process Maintenance, June 28.

15 YEARS

George W. Wilkerson, Building Services, June 15.

Helen L. Ross, Engineering Division, June 25.

Mary R. Ferguson, Production Analysis, June 25.

10 YEARS

William O. Brucker, General Machine Shop, June 19.

John T. Sweeney, Electrical Engineering, June 19.

James N. Abele, Mechanical Design Engineering, June 19.

SAFETY SCOREBOARD

The Y-12 Plant Has Operated

132 Days Or

5,239,000 Man-Hours

(Unofficial Estimate)

Through June 13

Without A Disabling Injury

SAFETY AT HOME, AT WORK, AT PLAY

THREE VILLIANS

Three storage areas of the home —attic, basement and closets — are where 16 percent of all dwelling fires begin. Clean out these out-of-sight places now.

STATE BOARD WITH SPECIAL GUESTS—The State of Tennessee Board of Boiler rules committee recently met in Oak Ridge's Y-12 Plant. From left are, Emil M. Kloeblen, Union Carbide's Linde Division, national chairman of the UCC Pressure Vessel Codes and Regulations Committee; Turk O. S. Humphery; Richard L. Culpepper, Tennessee chairman; Morris S. Snow, Jr.; Sam F. Harrison, executive director of the National Board of Boiler and Pressure Vessel Inspectors; Fred R. Abernathy; George H. Harmon; Albert M. Harwood; Charles W. Jones, vice president, International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers; and Charles W. Allison. 6-14988

Latecomers Win 2 Starlite Roll-Offs!

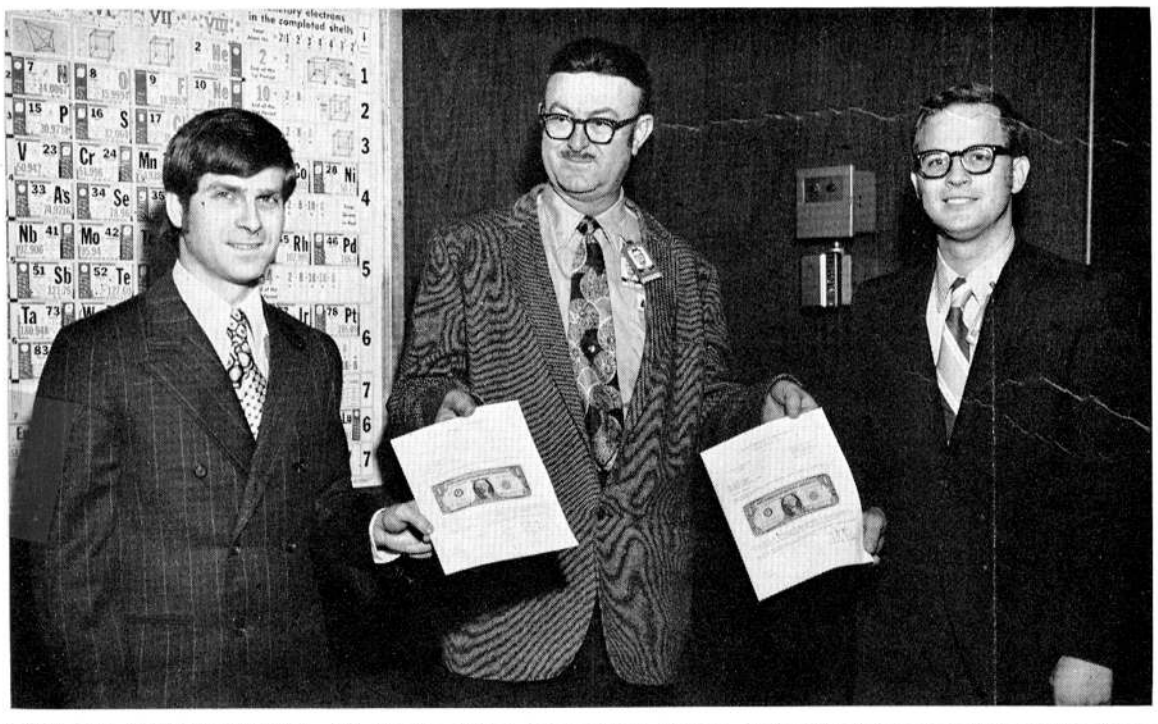
The Latecomers won the big roll-off recently in the Carbide Starlite League, taking the first two games in the roll-off with the Mix-Ups. (The Mix-Ups had won round one in the league.)

A second-half roll-off saw the Latecomers down the Splitters after tieing with them in final play. Thus the 'Comers had to win two roll-offs to become unchallenged champions of the Knox League.

Final standings follow:

Team	W	L
Latecomers	34	17
Splitters	34	17
Mix-Ups	33	18
Woodpeckers	29	22
Raiders	28	23
Rollers	26	25
Pin Boys	25	26
Wildcats	20½	30½
Comets	14	37
Marauders	11½	39½

LINDE OFFICIAL—Emil M. Kloeblen, Union Carbide Corporation's Linde Division, right, is chairman of the UCC Pressure Vessel Codes and Regulations Committee. He is also a representative of Owner-Users and Manufacturers on the American Society of Mechanical Engineers Boiler and Pressure Vessel Code Main Committee. A 37-year Union Carbide veteran, he chats with Y-12ers James C. Thompson and Herb Pohto, center.



PATENT APPLICATION—'A Method for Preparing Boron Suboxide' has brought Cressie E. Holcomb, Jr. and Ottis J. Horne, Jr. a patent application. James M. Schreyer, center, superintendent of Chemistry Development, presents the development engineers their $1 application letters. Holcombe is at left, Horne at right.

Boiler Rules State Board Meeting is Hosted by Y-12

The Oak Ridge Y-12 Plant recently hosted an annual 'out-of-Nashville' meeting for the State of Tennessee Board of Boiler Rules to give engineers, fabricators and other interested persons an opportunity to attend the meeting and participate in its activities.

Technical discussions centered around the American Society of Mechanical Engineers' code requirements, safety, state laws and code case presentations. Thirty-seven out-of-town guests attended, along with many representatives from the three AEC facilities here, as well as the Atomic Energy Commission.

The group toured the steam plant in Y-12, and the High Flux Isotope Reactor at Oak Ridge National Laboratory.

Guests at the recent conference were Richard L. Culpepper, Combustion Engineering, Chattanooga, Chairman of the Tennessee Board; Fred R. Abernathy, Tennessee Eastman, Kingsport; George H. Harmon, Precision Parts, Nashville; Morris S. Snow, Jr., Travelers Insurance, Memphis; Turk O. S. Humphrey, Humphrey Engineering, consultants, Memphis; Albert M. Harwood, Combustion Engineering, Chattanooga; Charles W. Allison, Nashville; Leonard O. Evans, Maryville, and Walter F. Knight, Knoxville.

Sam F. Harrison, executive director, National Board of Boiler and Pressure Vessel Inspectors, was special guest, along with Emil M. Kloeblen, Union Carbide Corporation, Linde Division, Tarrytown, N. Y. Kloeblen is chair-

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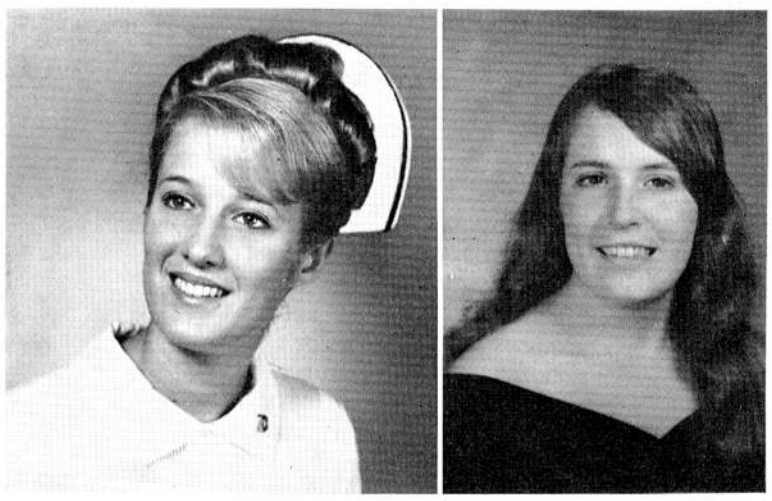
Underwood Daughters Are Graduated In 2 Different Exercises During May



Peggy and Patricia Underwood

The Eugene Underwood family at Route 2, Lancing, marked May as an outstanding month because of graduations. Peggy Joyce, the older daughter, was graduated May 21 from the East Tennessee Baptist Hospital School of Nursing. While in school, Miss Underwood served as president and vice president of the Student Government Association, member of the Glee Club, student council, and Baptist Student Union. She was a cheerleader, captain of the volleyball team, and was voted Miss Senior by her graduating class. She will graduate among the top four nurses at exercises at the Broadway Baptist Church, Knoxville.

Miss Underwood will be employed at the East Tennessee Baptist Hospital.

The Underwoods' other daughter, Patricia was graduated from Central High School, Wartburg, on May 27.

The younger Miss Underwood majored in vocational office education, and has served as a member of the Student Council, class secretary for two years, member of the VOE Club, member of FHA for one year, and was selected as a candidate for Senior Sweetheart. She also served as secretary and treasurer of Pilot Mountain Baptist Sunday School for the past two years.

The father is in Y-12's Alpha Five Processing.

Boiler Rules Board

(Continued from Page 3)

man of the UCC Pressure Vessel Codes and Regulations Committee, and a representative of the Owner-Users and Manufacturers on American Society of Mechanical Engineers' Boiler and Pressure Vessel Code Main Committee.

Charles W. Jones, vice president of the International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers, was also at the meeting.

Howard Miller, Mechanical Inspection, took the National Board of Boiler and Pressure Vessel Inspector Examination at the Y-12 Plant. The examination requires one to two days to complete.

MAJORETTE — Debbie Webb, daughter of William E. Webb, Utilities Administration, has been named a majorette at Harriman High School, where she will march before the Rhapsody in Blue band. Younger sister Susan is in the band in Junior High.

Alvey-Carmack Keep Top Melton Hill's Golf Berth

The Alvey-Carmack team stand all alone in the lead for Melton Hill Golf League's big summer race. Bob Carmack recently fired a low 31 for the record score of the day.

George Cantrell was low handicap greensman with a 32.

League standings (June 8):

Team	W	L
Alvey-Carmack	26	10
Sherrod-Wyrick	23	13
Riggs-McElroy	22	14
Tuck-Wetzel	22	14
Crowder-McDonald	22	14
Sherrod-Brown	21	15
Raymer-Hill	20	16
Tiller-Kinlaw	18	18
Holdaway-Loveless	17	19
Cantrell-Burrus	17	19
Ammons-Dessen	14	22
George-Babb	12	24
Babb-Evans	11	25
Amerine-Briscoe	6	30

J-Shift Golf Tops Is Still In Pryor-Lord Possession

J Shift golfers on South Hills greens still have Pryor and Lord out front by a mere two-points. Dick-Wheeler follow in second place.

League standings (June 8):

Team	W	L
Pryor-Lord	32	4
Dick-Wheeler	30	6
Clabough-Harris	24	12
J. D. Collins-Avis Collins	19	17
Sise-Smith	16	20
Hawk-Baxter	16	20
E. Collins-R. Collins	16	20
Kirby-Miller	16	20
Cornett-Scarbrough	15	21
Lay-Smith	2	34

Coffee-Davenport Move Up In Kingston League

The Jones-Morgan, Coffee-Davenport teams stand neck-to-neck in the Southwest Point Golf League, after four weeks of action.

Coffee-Davenport moved up with a five-point win over Bolt-Pelfrey.

League standings (June 1):

Team	W	L
Jones-Morgan	19	5
Coffee-Davenport	19	5
Mee-Wright	18	6
Burger-Stanton	13	11
Brown-Rowland	9	15
Elkins-Smith	8	16
Briscoe-Williams	6	18
Bolt-Pelfrey	4	20

Ride wanted from South Knoxville, Fordtown Drive off old Sevierville Pike, to Bear Creek or Pine Ridge Portals, straight day. C. King, plant phone 3-7895.

Ride wanted from West Haven section, Knoxville, to Bear Creek Portal, straight day. Pat Parrish, plant phone 3-5007.

Powell Daughter Wed

Mrs. Roger Lee Lane

Mr. and Mrs. William E. Powell, 904 Medaris St., Clinton, announce the marriage of their daughter Brenda Ann to Mr. Roger Lee Lane. The rites were performed Saturday, June 12, at the home of the bride. The Reverend E. J. Brown officiated.

The bridegroom is the son of Mr. and Mrs. William Lane, Detroit, Mich.

The bride is a recent graduate of Clinton High School.

After a wedding trip to Michigan, the couple will live in Clinton, where Mr. Lane is employed at Bush Brothers & Co.

Mr. Powell, the father of the bride, is in Y-12's Dispatching Department.

Bowers-Rowan Keep Lead On South Hills Fairways

The Bowers-Rowan team tentatively holds down the reins in the South Hills Golf League, only one point ahead of the Parrot-Sewell duo.

The Tipton-Leete team scored low recently with a 41 score, scoring a 40 the week before.

Team	W	L
Bowers-Rowan	27	9
Parrott-Sewell	26	10
Henderson-Nicely	23	13
Leete-Jones	22	14
Cogswell-Jones	22	14
Loupe-Rutherford	21	51
Tipton-Watkins	19	17
Wright-Whithorn	19	17
Norris-O'Neal	16	20
Evans-Pappas	15	21
Cowan-Troutman	15	21
Collins-Cabe	11	25
Cooper-Parker	10	26
Ferree-King	6	30

Assembly Names Safe Worker of the Month

Billy G. Layman was chosen "Man of the Month" recently in the Assembly Division. Layman, one of the division's veterans, was honored by fellow workers for suggestions made to eliminate unsafe conditions in the area.

Selection of "Man of the Month" is not new in Assembly's safety program. New emphasis has been placed on the honor, however, with the recent design of a certificate honoring that Assembly person for significant contributions on the safety efforts. Steve Hull is divisional safety coordinator for 1971 and has many new safety ideas to assist the division in efforts to prevent employee injury.

Assembly personnel are proud of their eight years of operation without a disabling injury. First aid and serious injuries have been significantly reduced, and the year's injury summary shows a steady decline in all-injury frequency rate. This is fair evidence that divisional safety efforts are paying handsome dividends.

Six Y-12ers Set July 1 As Retirement Initiation

A total of six Y-12ers take 134 years of service with Union Carbide Corporation with them when they retire June 30. Kyle C. Arnold, Chemical Services; Victor Defenderfer, Beta Two Chemistry; William A. Nichols, Sr., Material Transfer and Packing; Robert L. Oswald, Process Maintenance and Walter H. Stockig, General Machine Shop, all reach retirement status, and Edward C. Hodges, Machine Maintenance, has elected early retirement, with 25 years company service.

Congratulations and good luck!

Graduates Cum Laude

Peggy Ann Franklin

Peggy Ann Franklin, daughter of Mr. and Mrs. William A. Franklin, 124 W. Bryn Mawr Cr., Oak Ridge, graduated cum laude from Carson-Newman College in Jefferson City with a bachelor of science degree, majoring in biology.

She was a member of Tri-Beta Biological Honor Society, Science Honor Society, Hypation Society and a member of the Appalachian (Carson-Newman yearbook) staff.

Miss Franklin has accepted an assistantship from the Zoology Department of The University of Tennessee and will begin graduate study toward a degree in higher education.

Her father is in Y-12's Beta Two Assembly, and her mother is an RN at Oak Ridge Hospital.

Y-12 Shiftmen Set Party June 26, at Clark Center

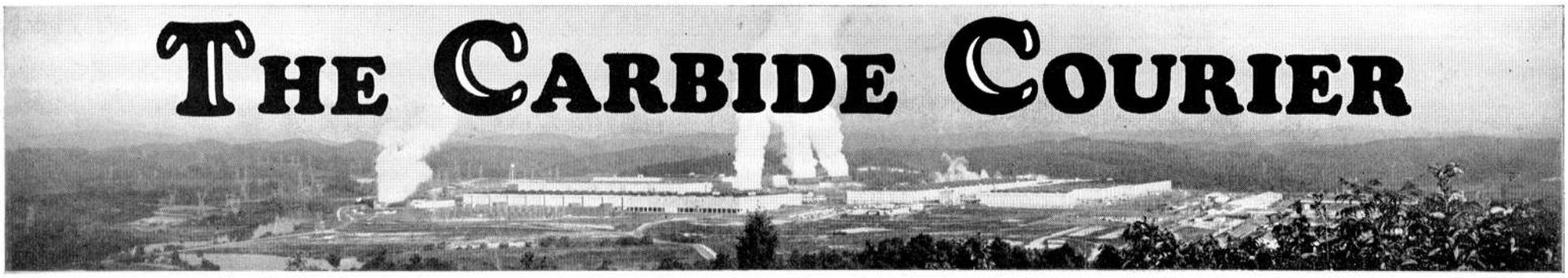
E, F, G, H and J Shift folks are planning a big get-together Saturday, June 26, at the Clark Center Recreation Park.

Weiners will be served from 2 to 3 p.m. and bingo games played from 4 until 6:30. There will be 10 games for the kids, and 10 to the 'older' folks.

All Y-12ers and their families are welcome. (Somebody in the family should wear a plant badge for identification.)

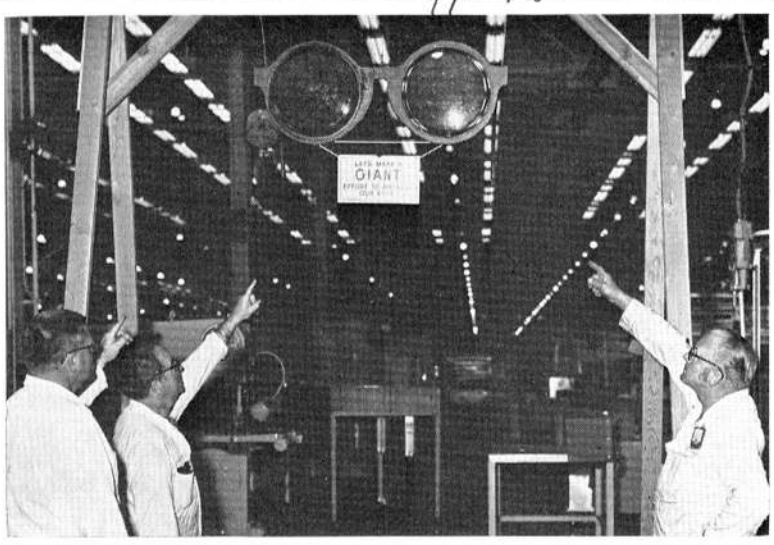
JOINT PATENT APPLICATION—Foraker Lambdin, left, and William W. Randles, right, receive a $1 patent application letter from George Marrow, Materials Engineering Development, standing, for a joint effort, 'Methods for Manufacturing Fibrous, Carbonaceous Composites Having Near Isotopic Properties.'

THE CARBIDE COURIER



Thursday, June 17, 1971

71-786



A BIG REMINDER — Sheetmetal workers, from left, W. Brown, M. S. Haurilak and D. E. Gentry point to this huge pair of glasses as they enter K-1401 reminding them that safety glasses are required for all personnel and visitors in the K-1401 shops. In the lower photo, signs on the outside of all doors to the shop area also proclaim that safety glasses are required.

71-787

20 Years' Service

N. W. Gatewood	6-01-51
G. H. Bellamy	6-01-51
J. B. Judd	6-08-51
H. R. Kitchin Jr.	6-08-51
J. S. Schrimsher	6-10-51
C. S. King	6-11-51
O. H. Howard	6-11-51
W. E. Hill	6-11-51
L. L. McCauley	6-15-51
M. H. Randolph Jr.	6-18-51
H. F. Murphy	6-21-51
G. C. Baker	6-22-51
D. M. Gunness	6-25-51
E. M. Byrd	6-29-51

Fabrication and Maintenance Efforts In Cost Reductions Gaining Momentum

The Fabrication and Maintenance Division's renewed cost savings effort launched in late March appears to be gaining momentum. The monthly session of the cost reduction board was held on May 19, and a calendar year to date figure of $120,000 savings was reported. Of the $120,000 total, $112,000 has been reported since the late March period when the cost reduction board was appointed and goals were set for the remainder of the year. According to Division Superintendent, L. A. Studinger, the secret to the success of the program is the involvement of every person in the division. "We are especially asking that the hourly personnel make known and be recognized for the cost saving ideas that they develop, and they are coming up with some real fine ideas," says Studinger.

Special guest speakers presenting their ideas to the board were J. L. Layne, welder; and A. H. Rucker, maintenance mechanic. Layne suggested a change in welding procedures that resulted in increased welding efficiencies. Rucker recommended a safer and more efficient method of accomplishing the lateral adjustment of forks on a heavy-duty forklift.

Those participants reported for the May session are: W. N. Berry, J. H. Boggs, F. W. Calhoun, G. S. Dalton, O. H. Dillon, T. G. Dru, J. Duncan, W. L. Ford (Computer Technology Center), A. F. Griffin,

E. L. Halstead, J. E. Harvey, J. E. Heiskell, E. Hembree, H. R. Hodsden, C. C. Hull, A. T. Humphreys, C. Y. Jacobs, K. L. Kreger, J. M. Lawson, J. L. Layne,

C. M. Martin, C. F. Moon, J. F. Mooney, M. B. Phillips, J. W. Pickel, J. R. Quarles, A. H. Rucker, B. J. Schaefer, L. Smith, L. A. Studinger, H. R. Walls, W. J. Weeks, B. I. Wyatt (Computer Technology Center).

2nd Hole-In-One!

C. D. Hawkins, Computer Services, CTC, has the unique distinction of having scored two holes-in-one on the same green, same golf course. Hawkins got his second ace on the No. 2, 100 yard par 3 hole at the Colonial Golf Course, off Chapman Highway in Knoxville on Friday, June 3. He got his first one at the same green last fall. Wonder what the betting odds are on this feat?

Clayton, Johnsson, Phillips, Robinson, Frieda Dodge and Birdie Marr Retiring

Six employees will retire this month from ORGDP, many of them old-timers whose company service dates back to the beginning of the plant. Retiring are B. J. Clayton, Frieda Dodge, F. O. Johnsson, Birdie Marr, W. A. Phillips and C. W. Robinson.

B J. Clayton

Benjamin J. Clayton has been a machinist in the Fabrication and Maintenance Division, having been employed here since July, 1945. Prior to coming with Union Carbide, he served three years in the U. S. Army in Europe. Before that he worked for Woodward Iron Company, Woodward, Ala., and for Southern Draft Paper Company and Waterman Steamship Company, both in Mobile, Ala.

Mrs. Clayton is the former Rebecca A. Marteen. They have two daughters, Edith Evelyn and Alice Rebecca. Both the Claytons are active in the Trinity Methodist Church of Lenoir City. They live at Route 4, Harriman Road, but plan to move to Florida following Clayton's retirement.

Frieda Dodge

Frieda Davie Dodge has been a secretary in the Electric Engineering Department of the Engineering Division. She was employed in May, 1944, coming here from the Humboldt (Tenn.) City Schools and, before that, worked with Sears, Roebuck Company, Nashville.

Mrs. Dodge was born in Hopkinsville, Ky., and attended public schools in Clarksville. She has attended Peabody College, Nashville, and has taken extension courses at The University of Tennessee. She is presently working toward a degree in industrial engineering at UT. She is married to John B. Dodge, a retired school band director. They live at Route 2, Harriman.

A wide variety of interests will occupy Mrs. Dodge's time—"writing, gardening, raising and showing Boxer dogs, reading and catching up on sleep."

(Editor's Note: Mrs. Dodge has been the most faithful contributor to the Carbide Courier. Good luck, Frieda, and thanks!)

F. O. Johnsson

Frederick O. Johnsson has been an inspection foreman in Dimensional Inspection, Laboratory Division. He came here in June 1952, from the Le Tourneau Company, Vicksburg, Miss. Before that he was with the U. S. Corps of Engineers at Vicksburg in Construction Services Administration. He served in the U. S. Navy Sea Bees Reserve for four years as a chief construction mechanic.

Johnsson was born in Newport, R. I. He completed public schools there and completed his tool and die maker apprenticeship with Brown and Sharp in Providence. Mrs. Johnsson, the former Doris Braley, has been with the Oak Ridge Public Library for 16 years. She is locally known as the "Voice of the Library."

The Johnssons have two sons, Rick, and Noel, both of Asheville, N.C.

They live at 105 Scott Lane, Oak Ridge.

Johnsson's outside interests include music, the Playhouse, bowling, fishing and golf. He has acted in and directed nearly all of the Gilbert and Sullivan operattas and has played leading parts in five grand operas. He is director of the Boys Club Chorus and is Past Exalted Ruler of the local Elks Lodge. He has served as Santa Claus for the Carbide Children's parties for the past several Christmases and has volunteered for the role again this year.

The Johnssons plan to remain in Oak Ridge. He will get to visit the boys (in the Chorus) more often and do some much needed work around home.

Birdie C. Marr

Birdie Czar Marr has been a telephone operator in Telecommunications Service since September, 1945, first with the U. S. Corps of Engineers then with Union Carbide when the communications function was assumed by Carbide. Before coming to Oak Ridge, she was a local and long distance operator in St. Louis, Mo.

A native of St. Louis, Mrs. Marr attended school there, and has taken courses at UT. She has a son, Don, who is a professor in fine arts at Hendericks College in Conway, Ark. He plans to teach in India this summer.

Stamp collecting, raising flowers, swimming and travel will occupy most of Mrs. Marr's time. She has traveled extensively in Europe and Mexico and visited in the Bahamas and Cuba. She plans another trip to Europe next year.

Mrs. Marr lives at 131 Tabor Road, Oak Ridge.

(Continued on Page 4)

71-898

Dodge

Frieda Dodge

B. J. Clayton

71-889

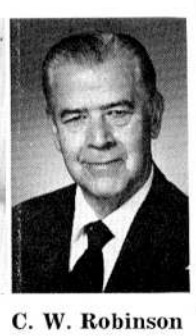
F. O. Johnsson

71-889

Birdie Marr

71-899

W. A. Phillips



C. W. Robinson

71-916

Allan H. Jordan

A. H. Jordan Upped To Barrier Foreman

Allan H. Jordan was promoted on June 1 from a senior inspector to barrier foreman in the Barrier Plant, Operations Division. He has been employed here as an operator in both Cascade and Chemical Operations since August, 1945. Before his employment here, he served four years in the U. S. Army in World War II.

Jordan was born in Tellico Plains and graduated from public schools in Lenoir City. He is married to the former Meredith Shamblin of Maryville. They have three children; William Allan, graduate of East Tennessee State University at Johnson City, employed at Miller's Store, Knoxville; Thomas Andrew, a junior at ETSU; and Sara Linda, in Oak Ridge High School.

Jordan's outside interests include occasional fishing and all spectator sports. The Jordans live at 111 Diston Road in Oak Ridge.

Lab Notes

Charles Manning, an inspector in Physical Measurements, Inspection and Nuclear Technology Department, Laboratory Division, is currently serving as president of the Anderson County Beekeepers Association. This Association recently sponsored a course in beekeeping, taught by Leslie H. Little, state apiarist with the Tennessee Department of Agriculture.

Manning has been keeping bees since 1959 when he was a sophomore in high school. He has about 30 hives at present in two different locations. He was named Grand Champion in the Anderson County Fair Honey Show last year and has won several awards in state competition. He is a graduate of the TAT Program and has been employed here since November of last year.

SAFETY SCOREBOARD

OUR PLANT
Has Operated
510,000 Safe Hours
Through June 10
Since last disabling injury on May 4

H. Harrel, AECOP Passes CPA Exam

Hicklin A. Harrel, Jr., was recently named a Certified Public Accountant by the Tennessee State Board of Accountancy. This came as the result of passing the November 1970 Uniform CPA Examination, an examination used by state boards in all 50 states. His certificate was presented May 11th at a meeting of the Knoxville Chapter of the Tennessee Society of Certified Public Accountants.

Harrel

Harrel is a graduate of the University of Houston with a bachelor's degree in accounting, a master's degree in industrial management, and additional graduate work in business economics.

Formerly with Brown & Root, Inc., engineers and constructors, and Hughes Tool Company, oil field tool manufacturers, Harrel is now a planning consultant in AECOP (Atomic Energy Commission Combined Operations Planning), a multi-contractor group administered by Union Carbide.

Next Golf Tournament

The third K-25 Golf Tournament of the current season will be held at the Southwest Point Golf and Country Club on Saturday June 26. Starting times may be obtained from the Recreation Office on Monday, June 21.

Bowers Daughter Chosen For Eastman Internship

Patricia Bowers

Patricia Bowers, daughter of Mr. and Mrs. Francis Bowers, Oliver Springs, has been accepted by Eastman Kodak Company, Rochester, N. Y. to do her dietetic internship training.

Miss Bowers is a graduate of Oliver Springs High School and completed her college work in December at Tennessee Technological University, Cookeville. She has since been employed at the Cookeville Golf and Country Club.

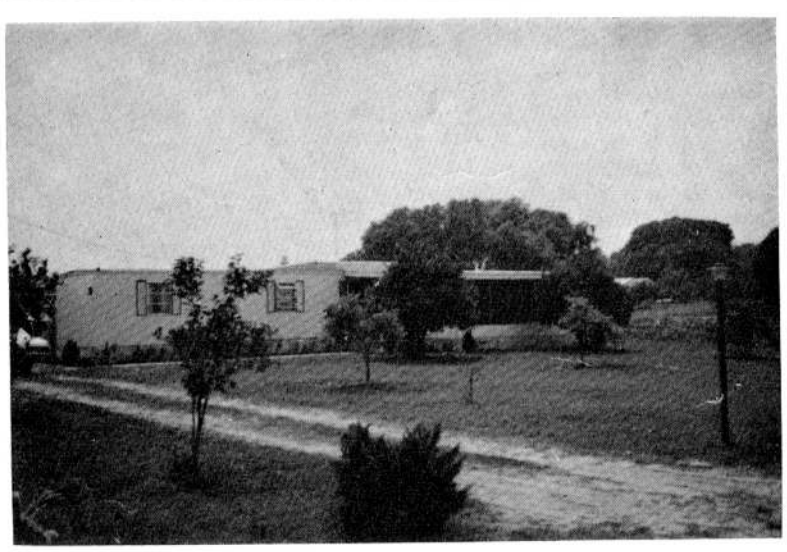
Her internship, beginning this month, will last a year. Miss Bowers hopes to work toward a master's degree after that.

Bowers is in ORGDP's Development Maintenance Department.

The real essence of work is concentrated energy.

UT GRADUATE — Marian A. Sanders, daughter of F. R. Sanders, Separation Systems Division, was graduated June 10 from The University of Tennessee with a bachelor's degree in education.

CONGRATULATIONS! — Evelyn Ritchey, daughter of Ben R. Ritchey, U-235 Separations Department, Operations Division, is a 1971 graduate of Greenback High School.



RETIREE'S HOME—This is the residence of C. L. 'Cope' Potts in Altoona, Fla. Potts retired from ORGDP last year and spends his time gardening, fishing and attending his duties as new governor of the Altoona Moose Lodge. He asks all his old friends to stop by. His address is Box 62, Altoona, Fla. 32702.

Retirements

(Continued from Page 3)

W. A. Phillips

William A. Phillips has been a maintenance mechanic in the Compressor Shop, Fabrication and Maintenance Division. He has been with Union Carbide since April, 1945, coming here from the A. B. Long Construction Company in Harriman.

Phillips was born right here on the K-25 site, near where the K-33 building now stands. He attended Emory School in Roane County. Mrs. Phillips is the former Pauline Harvey. They have six children, Billie Ruth Gillis, Sarasota, Fla.; James T. Phillips, living in West Virginia; Debra Schandly, Kingston; Thelma Faye Miller, Memphis; Cheryl Kay McKinney, Harriman; and Darlene, at home.

Phillips plans to do some truck farming in the spring and summer months and just rest and hunt during the winter.

The Phillips home is at Route 2, Harriman.

C. W. Robinson

Cecil W. Robinson has been an instrument mechanic in the Instrument Fabrication Department, Fabrication and Maintenance Division, since June, 1944. He came here from Alcoa.

Robinson was born in Lewisburg, Tenn. and completed school in Maryville. Mrs. Robinson is the former Frances Elizabeth Pitts. They have a son, Edward, Washington, D. C., and two grandchildren.

Robinson's outside interests include reading and gardening in general, but mainly growing decorative and exhibition-type chrysanthemums. He also enjoys spectator sports, especially football. He plans to pursue his hobbies and add some camping and travel to his leisure. He also plans to do some experimenting in mechanics and electronics in his home workshop.

The Robinsons live at 108 East Pasadena Road, Oak Ridge.

Lost Items Turned In

The Recreation Office has two wedge irons, one turned in from the Whittle Springs tournament this April and one from Southwest Point last year. We also have a pair of prescription safety glasses lost at Whittle Springs. The owners may have these items by identifying them.

15 Years' Service

J. A. Corn	6-05-56
I. J. Mooney	6-05-56
M. D. Medved	6-11-56
C. G. Jones	6-13-56
B. L. Crass	6-14-56

THE CARBIDE COURIER
Published Biweekly
Editor ..... H. J. Mayberry
K-1002 Building, Tel. 3-3097

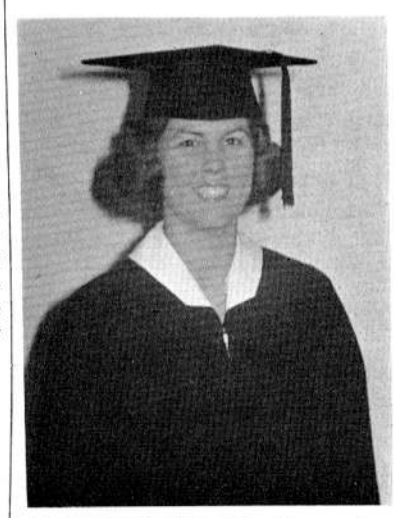
Osborne Daughter Honored at College

Cassandra Osborne

Cassandra Osborne, daughter of Mr. and Mrs. A. W. Osborne, Buildings and Grounds, was awarded the Pfaff Cup at the annual honors and awards program at Warren Wilson College, Swannoa, N. C., on May 7. The college's highest honor and an accompanying cash prize is given to the graduating senior who, in the opinion of the faculty, most nearly approaches the ideal student in citizenship, achievement and contributions to the community.

Miss Osborne has been on the dean's list each semester throughout her four years at Warren Wilson. She also received a scholar's medal for superior academic achievement, has served as a member of the House Council and has been vice president of Schafer Court, vice president of Demetra and treasurer of the junior class.

She is a 1967 graduate of Oak Ridge High School.



CONGRATULATIONS!—Sharon Ann Black, daughter of C. V. Black, Separation Systems Division, was graduated from The University of Tennessee this spring with a B.S. degree in chemistry. She is now employed at House-Hasson Company, Knoxville.

The Neighborhood Scene

What does the typical American see when he looks at his neighborhood?

● There aren't quite as many small children around America's neighborhoods anymore. At least not in comparison to a few years ago. Today, the nation has about 19 million children too young for school (under five). They represent only nine per cent of the population. At the start of the decade (when there were more than 20 million toddlers) 18 per cent of the population was under five.

● An awful lot of time is spent discusisng and trying to solve the problems of youth. And with good reason: all those babies born in the late 40's and 50's are growing up. In fact, today more than one-fourth of the total population—more than 52 million youngsters are in the five-to-17 year old age bracket.

● There are more weddings than there used to be. That will be true for several years to come. There are more than 10 and a half million young people 18 to 20 years old—a 48 per cent jump in this age group in the 1960s. That explains a lot: the weddings—about two million last year; and the rising number of college students—nearly seven and a half million, a half million more than just a year before.

It takes more money to maintain a family when the children are out of diapers and growing up. That's one reason why so many two-income families have been cropping up. (There are 16 million wives in the nation's working force. In addition, there are more than three-and-a-half million people—mostly men—who hold down two jobs.)

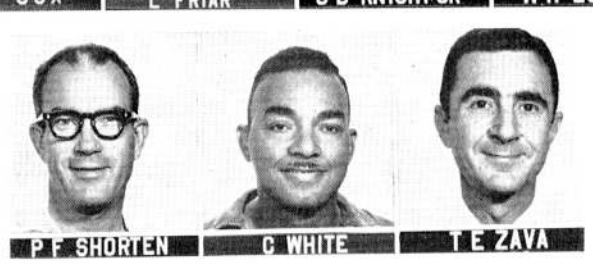
One big reason for this (in addition to rising prices, taxes and the immediate day-to-day needs of growing children) is the cost of education.

Yes, despite the costs, college enrollments have continued to rise. One reason, of course, is the realization that income prospects of a college graduate are markedly better than those of people who terminate their educations after high school.

The indications are that higher education and technical training will continue to pay off well into the 1970s, due in large part to a persisting shortage of experienced, new job requirements.

Knowledge comes, but wisdom lingers.

June's 25 Year Veterans



Cancer of the Testis

By T. A. LINCOLN, M.D.

Cancer of the testis is in about the same public awareness position as cancer of the breast and uterus were 30 years ago. Since then, the importance of the self-examination of the breast and the Pap test have "liberated" these two common cancers from public ignorance. There is an urgent need to also "liberate" testicular cancer from any sensitivity to public discussion.

Although cancers of the testes are not common, accounting for only four percent of all cancers in men, they are important because they affect young men in their prime. Almost 80 percent of patients are less than 40 years of age. Of additional concern is the apparently increasing frequency of this disease.

Dr. Lincoln

In Copenhagen, Denmark, the age adjusted incidence of all types of cancer of the testis doubled from 3.2 cases per 100,000 population per year to 6.3 between 1943 and 1962. The increase in rural Denmark was from 3.0 to only 3.7. These data are among the best in the world because Denmark has a racially uniform population, an excellent cancer reporting system, and they have kept cancer of the testis separate from other cancers of the male genital tract. This increase has been seen in several other Western countries. In the United States, the mortality in whites in the 15-34 age group rose by about 50 percent between 1933-1954. The British journal, **Lancet**, in July, 1968, concluded, "There seems little doubt that in Denmark (and, perhaps elsewhere) there has been a highly significant change in the incidence of testicular cancer, and it seems reasonable to conclude that this is due to exposure to some carcinogenic factor or habit." Is an increased risk to testicular cancer another price to pay for living in big cities?

Some other interesting epidemiological facts have been uncovered. In a large study of men under age 45 in New York City, mortality was twice as high among Jews as among non-Jews and only half as high among Catholics as among non-Catholics. The reason may be an ethnic difference since the Catholic population in New York is largely of persons of Italian and Irish ancestry and the Jewish population is almost entirely of Eastern European origin. The Protestant population is more heterogeneous.

Early Treatment Vital

Another fact which suggests the importance of genetic factors is the rarity of testicular cancer among blacks, both in New York City and in Africa.

The incidence of testicular cancer is almost 50 times greater in an undescended testicle than in a normal testicle. For this reason, most surgeons strongly recommend surgery or hormone treatment to get the testicle to descend, and if unsuccessful, have it removed.

The prognosis for this cancer varies widely, depending on the particular cell type. The five-year cure rate following surgery, and in many cases radiation therapy, varies from a high of over 90 percent to a low of almost zero. Fortunately, one of the most common types, the seminoma, is the most curable if discovered and treated early enough.

Medical Advice Delayed

Even though an early diagnosis doesn't help in some cases and a late diagnosis may not be fatal in other cases, the importance of early detection needs to be emphasized. Most of these tumors spread through the lymph system. If the tumor is found before it has spread to the first lymph node, even highly malignant tumors can sometimes be cured. There is a chain of lymph nodes extending up the back of the abdomen on either side of the major blood vessels. As time goes by, the tumor gradually spreads through node after node until it becomes so widespread that cure is impossible.

What is particularly tragic is the delay in seeking medical advice. In a large series of cases studied at Columbia University, New York, there was an average delay of three months between the time the patient had his first symptoms before he visited his physician. Usually there is no pain, but there may be a dull ache in the lower abdomen or inguinal region. Sometimes there is a sensation of heaviness in the groin. Frequently the victim becomes aware of a change in the size or consistency of one testicle, but since it causes no pain he waits for it to "go away".

Easy to Ignore

Occasionally testicular cancers are found during a periodic physical examination. An enlargement of one testicle to almost twice the size of its mate is sometimes found with the patient totally unaware of any change. Since the growth is slow and usually painless, it is easy to ignore.

The lesson for young men to learn is to be deeply suspicious of any change in size or consistency of their testicles. A stony hard lump or enlargement is especially dangerous. When they bathe, they should make a practice of quickly checking themselves. As an additional precaution, a periodic physical examination is wise.

Young men who think cancer only affects old men should wake up. True, most cancers do increase with age, but the incidence of testicular cancer declines after age 40 until it starts up again about age 70.

AARP Chattanooga Trip Set for June 23

The local chapter of the American Association of Retired Persons meet tonight at 7:30 p.m. in the Oak Ridge Civic Center. No business meeting will take place as the AARP celebrates its second anniversary with skits and special music.

Mrs. Ben Addison is planning a trip to Chattanooga June 23 for AARP members. The first stop will be the Houston Antique Museum, which houses a collection of antiques, some 15,000 pitchers (including a plated Amberina worth over $6,000). There are also rare types of Tiffany, Burmese and Staffordshire among the teapots, cruets, guns, Bibles and stamps. All these items were collected by Anna Safeby Houston during her lifetime and given to the City of Chattanooga. The museum was the subject of an article written by Bob Miller in the Tennessee Conservationist.

The next stop on the June 23 trip will be the Point Park atop Lookout Mountain. The incline railway will be available for those who wish to take the ride. Dinner at Pete Smith's, near Watts Bar Dam will bring the trip to a close.

AARP is also marking June 22 and 23 on the calendar, as days when defensive driving will be the subject of a two-day program at the Civic Center.

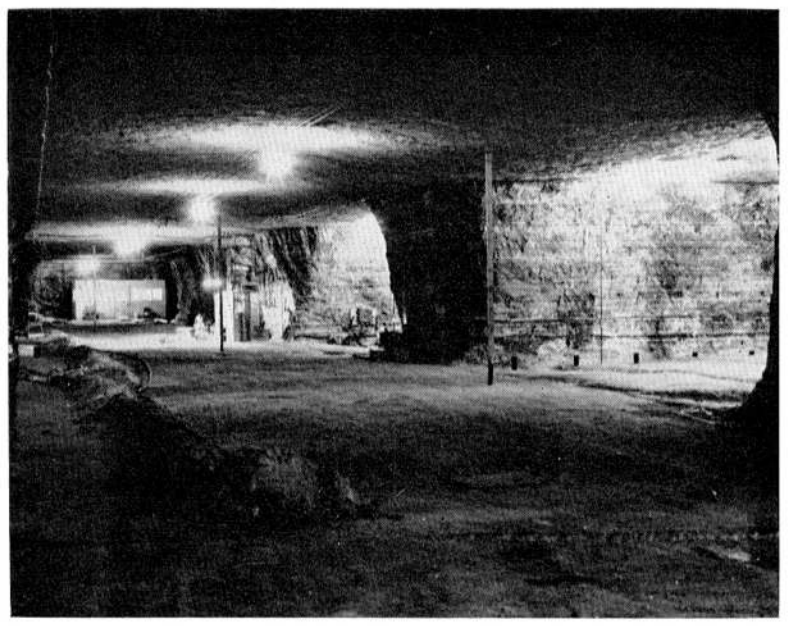
Y-12's Tommy Webber High Skeeter for May

Y-12er Tommy Webber almost shot a perfect score in May's Skeet firings, but was disqualified in the winning circle, because of previous highs. So, the top-notch post went to Perry Bullard, also of Y-12, who fired a fine 49.-407. Bill Denton, also from Y-12, accounted for a 48.762, and V. F. Raaen, ORNL, placed third with a score of 48.680.

Scorers in May's shootings:

Firer	H'Cap Score
R. A. Allstun, Y-12	46.716
C. Asmanes, Y-12	46.769
C. G. Brewster, Y-12	47.846
W. E. Brundage, Y-12	44.958
P. W. Bullard, Y-12	49.407
J. M. Case, Y-12	47.248
C. Chadwick	47.728
J. P. Comolander, Y-12	49.156*
W. H. Davy, Sr., K-25	47.877
Bill Denton, Y-12	48.762
B. F. Etheredge, Y-12	45.830
B. L. Powers, Y-12	47.195
V. F. Raaen, ORNL	48.680
A. K. Van Hull, Y-12	48.583
W. E. Weathersby, Y-12	49.179*
T. R. Webber, Y-12	49.461*
F. G. Welfare, Y-12	48.610

*Previous winner, under penalty.



MINE LIGHTS—Lights in a Kansas salt mine illuminate the canyon of walls of salt and instruments used in atomic waste storage study. The Atomic Energy Commission has proposed turning an abandoned salt mine, neglected for years, as a storage repository for radioactive waste which accumulate in the development and operation of nuclear reactors.

Abandoned Salt Mine Could Provide AEC Storage Area

An abandoned salt mine, neglected for years, may once again give service to man. The Atomic Energy Commission has proposed turning such a mine in a small Kansas town into a long-term storage repository for radioactive wastes which accumulate in the development and operation of nuclear reactors.

Although it sounds novel, the idea to bury radioactive wastes in salt mines was suggested as early as 1955. In that year, a committee on waste disposal was established by the National Academy of Sciences — National Research Council at the request of the AEC to consider possibilities of disposal of high-level wastes. After some study the Committee reported that "the most promising method of disposal for the high-level wastes at the present time seems to be in salt deposits."

Currently, liquid radioactive wastes are stored in underground, steel-lined, reinforced concrete tanks. However, methods have been developed for solidifying such wastes which greatly reduce their volume and make it feasible to ship them for storage deep underground in salt mines. This is the method envisioned for handling wastes from the rapidly-growing nuclear power industry, which is expected to increase by 70 percent in its power output by 1990.

Salt has many characteristics that make it particularly attractive. It is widespread and abundant, underlying about 400,000 square miles in portions of 24 states in the United States; it is as strong as concrete; it is easy and inexpensive to mine, and the mines are not located near major earthquake zones. Most importantly, salt deposits are dry.

In cooperation with the U. S. Geological Survey and several Kansas state agencies, the AEC is conducting additional geologic and safety studies at the site of the first demonstration salt mine repository, in Lyons, Kan. Once satisfied that all aspects of the operation can be done safely at the location, the AEC plans to seek authority from Congress to start the project in fiscal year 1972. The cost to establish the project is estimated at $25,000,-000.

The current project is a follow-up program to Project Salt Vault which was carried out by AEC's Oak Ridge National Laboratory in a mine near Lyons from 1965 to 1967. Project Salt Vault demonstrated the safety and feasibility of handling highly radioactive wastes underground, and provided engineering data for the proposed full-scale demonstration project.

If the project receives a Congressional go-ahead, it will take nearly three years before the site is completed and ready to receive radioactive wastes. It is expected that the Lyon's project may become the initial repository for the storage of solid high level radioactive wastes.

SEMINAR ON ENERGY

Marvin Yarosh, ORNL Reactor Division, will lead next week's advanced technological seminar on energy. His subject will be "Location of Centers for Generation of Energy."

The seminar is set for Wednesday, June 23, at 7:30 p.m. at the Troubadour Room of the Alexander Motor Inn, Oak Ridge.

Softballer Rangers Have Clean Slate

The Rangers now stand alone at the top of the Softball League, as the Gashouse Gang dropped one recently in action.

On May 25, the All Stars outlasted the K-25 Colts 9 to 6. The winners saw homeruns by Ritter and Tipton, while the Colts' Woodfin accounted for the only four-bagger for the losers.

The Gashouse Gang put the Knockers down in fine style 21 to 3 in game number two. The winners saw Northern, Legg and Langenburg cross the plate with four-baggers, while Cain and Morris homered for the losers.

Big Scores Seen

The Rangers routed the Bat Boys 33 to 1; with Stamey, Whittlesey, Hylton and Norris all poling long ones for the winners; Murphy mowed one over the fence to account for the only score the Bat Boys earned.

On May 27, the Eagles clawed their way past the Hootowls 17 to 3 . . . as the Moore-Roberts battery gave up 19 hits, and the Maulden-Thompson duet let 10 on base.

The Energetics earned a victory past the Turnabouts 18 to 3 with Marshall, Passmore, and Vann homering for the winning cause.

The K-25 Devils clipped the Bottlenecks 21 to 16. Big inning for the Devils proved to be number two, as six runs crossed the plate.

On June 1, the losers won from the Bat Boys 18 to 7. The Losers' Robinson knocked two homers for the winning cause.

Eagles Win Upset

The Colts kept a fairly even record by killing the M Wingers 21 to 7. Almost everyone on the K-25 team socked out a homerun, including Treadwell, Woodfin, Duncan, Nabors, Hatcher, Conner and Cornett.

Final game on June 1 featured the Eagles handing the Gashouse Gang their first defeat 15 to 7 in a rather decisive upset. Hits were about evenly divided, with the Eagles earning 11, the Gang, 10.

On June 3, play opened with the Rangers routing the Hootowls 25 to 1. The big Rangers ran out with 28 hits . . . homers in the columns of Sharp and Stamey and Smith with two each.

Gashousers Bounce Back

The Gashouse Gang bounced back from their June 1 defeat to oust the Losers 17 to 11. Their Brady, Hensley and Legg all homered, while Robinson ran four bases for the losers.

Final play on June 3 saw the Devils ease by the M Wingers 13 to 10 . . . as the winners' McLaughlin and Waters knocked homers. For the losers it was Teague with a lone homer.

On June 7, the Turnabouts turned and defeated the Knockers 8 to 1. The Energetics edged by the Raiders 14 to 13, and the Buccaneers slipped by the All Stars 5 to 4.

League standings (June 7):

Team	W	L
Rangers	6	0
Gashouse Gang	6	1
Buccaneers	4	1
Eagles	4	1
K-25 Colts	4	1
K-25 Devils	4	2
Energetics	3	3
All Stars	3	2
Losers	3	2
Bottlenecks	2	3
Centaurs	2	3
Bat Boys	2	5
Hootowls	1	4
Raiders	1	4
Turnabouts	1	4
M Wingers	0	4
Knockers	0	5

'Glad' Plant Set

(Continued from Page 1)

Carbide affiliates. An experienced Glad products sales organization will expand the marketing program, which has been in effect since 1968, for these products.

The acceptance of Glad bags and wrap in the United States, where they are the brand leader in the plastic household materials market prompted test marketing in Europe and the subsequent decision to build a local production facility. Alsdorf was chosen as the most advantageous location because of labor availability and its excellent distribution facilities.

The Glad trademark is familiar to European consumers and is accepted as an assurance of high quality and reliability. Glad wrap was introduced to Scandinavia in 1966 and now enjoys a major participation in this market. In Germany the product has been unusually well received and it is proving equally popular throughout other countries of Europe.

Jack Huff Caps Fourth All Carbide Rifle Shoot

Jack Huff, Y-12, took first place in the fourth match of the All Carbide High Power Rifle League with a 467 out of a possible 500. George Reimann, ORNL, was second with a 468, and Don Kiplinger, also of ORNL, was third with a 457. Other scores were:

Firer	Score
Jack Mrochek, ORNL	454
Bill Galyon, Y-12	439
Hugo Bertini, ORNL	431
A. A. Abbatiello, ORNL	417
V. L. Fowler, ORNL	412
Joe Crowell, ORNL	395
Tom Lemons, ORGDP	385
Dudley Hewett, ORNL	364
Hicklin Harrell, AECOP	346
Glen Davis, Y-12	280

Summer Lectures Begun Tuesdays, at Museum

A series of eight lectures has begun centering around the physical, biological, medical and environmental sciences here. For the third year, Oak Ridge Associated Universities and Oak Ridge National Laboratory will present a Summer Lecture Program for student and faculty visitors to the city under various research-participation and training programs.

The lectures are presented each Tuesday at 8 p.m. at the American Museum of Atomic Energy, Jefferson Circle. They will continue through August 3.

The lectures are open to the general public and there is no charge for admission.

Remaining lectures include:

June 22—THE MAN PROJECT, Norman Anderson, director, MAN Program, ORNL.

June 29—WHETHER ENVIRONMENTAL QUALITY? John H. Gibbons, director, NSF-ORNL Environmental Program.

July 6—MEDICAL ETHICS IN EXPERIMENTAL MEDICINE, Gould A. Andrews, chairman, Medical Division, ORAU.

July 13 — SCIENCE AND TRANS-SCIENCE, Alvin M. Weinberg, director, ORNL.

July 20 — RUSSIAN AND AMERICAN EXPERIMENTAL PHYSICS, R. S. Livingston, director of planning and analysis, ORNL.

July 27 — CIVIL DEFENSE, Eugene P. Wigner, Nobel Prize winner in physics and ORNL consultant.

August 3—Panel on RADIATION STANDARDS AND THE POPULATION, Roger Cloutier, moderator, medical physicist, ORAU.

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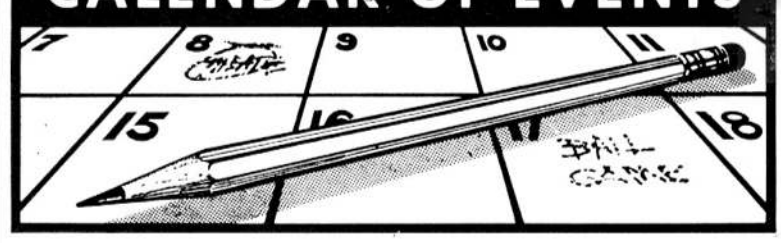

TECHNICAL

June 18

Physics Division Seminar: "A Summary of the Skylab Mission," R. E. Pace, Jr., Marshall Space Flight Center. East Auditorium, Building 4500N, 3 p.m.

Mathematics Division FORTRAN Class: Manuel Feliciano, Instructor. East Auditorium, Building 4500N, 9 to 11 a.m.

June 21-25

Mathematics Division FORTRAN Class: Manuel Feliciano, Instructor. East Auditorium, Building 4500N, 1 to 3 p.m.

June 22

ORAU-ORNL Summer Lecture Program: "The MAN Project," Norman Anderson. American Museum of Atomic Energy, Jefferson Circle, Oak Ridge, 8 p.m.

June 23

Advanced Technological Seminar on Energy: "Location of Centers for Generation of Energy," Marvin Yarosh. Alexander Motor Inn, Troubadour Room, 7:30 p.m.

Molten-Salt Reactor Program Information Meeting: East Auditorium, Building 4500N, 9 a.m.

June 24

Nuclear Safety Program Seminar: "Controlling Effects of Heated Discharges on the Aquatic Environment," M. A. Churchill, TVA. East Auditorium, Building 4500N, 9:15 a.m.

ORAU Medical Division Staff Seminar: (Title to be announced). Professors Basil Malamos and C. Constantinides, University of Athens, Greece. Medical Division Conference Room, Vance Road, 3:30 p.m.

Biology Seminar: "Cell Cycle Properties of the Spermatogonial Stem Cell in the Rat," Claire Huckins, Anatomy Department, McGill University. Host: E. F. Oakberg. First Floor Tower Annex Conference Room, 3 p.m.

June 25

Reactor Division Seminar Series on Reactor Technology: "The Liquid Metal Fast Breeder Reactor," Bill Harms and Mario Fontana. Large Conference Room, Building 9204-1, Y-12 Plant, 3 p.m.

June 28

Special Physics Division Seminar: "Recent Results at the CERN On-Line Isotope Separator (ISOLDE)," P. G. Hansen, CERN, Geneva. Building 4500N, Central Auditorium, 3:15 p.m.

June 28, 29

Mathematics Division FORTRAN Class: Manuel Feliciano, Instructor. Central Auditorium, Building 4500N, 1 to 3 p.m.

June 28-July 2

International Working Sessions on Fusion Reactor Technology, Oak Ridge National Laboratory.

June 30

Metals and Ceramics Division Seminar: "Laser Welding and Drilling Applications," A. J. Moorhead. East Auditorium, Building 4500N, 2:30 p.m.

July 1

Bimonthly Gas-Cooled Reactor — Thorium Utilization Information Meeting: "HTGR System Analysis Studies," L. L. Bennett; "Fission Product Release from Coated Particles During Thermal Annealing Studies," M. T. Morgan; "Fission Product Deposition Loop Studies," M. D. Silverman; "Fuel-Clad Mechanical Interactions in Fast Breeder Reactors," C. M. Cox. East Auditorium, Building 4500N, 9 a.m.

July 2

Physics Division Seminar: "How to Make Ultra-Pure Niobium for Use in Accelerators," R. E. Reed, Solid State Division, ORNL, Building 4500N, Central Auditorium, 3 p.m.

COMMUNITY

June 18, 19

Oak Ridge Playhouse presents two comedies, "Crawling Arnold" and "Black Comedy." Playhouse, 8:20 p.m. Admission: Adults $2.50; students $1.25. Friday only, AARP members, $2.

June 13-30

Art Center Annual Open Show. All media by artists living in Roane and Anderson Counties. Art Center, 3-6 p.m. Admission: $.50 nonmembers.

ORNL 10-61-71

ATTEND TRAINING CONFERENCE—The Nuclear Division Training Conference held recently centered on the objectives and special needs of training throughout the division. Seated, from left, are Dan Johnson, G. K. Bryant, C. A. Blake, O. L. Calvert, T. E. Cressler and R. J. Betts. In the second row are B. G. Catron, T. H. Freeman, J. A. Barker, J. M. Bender, P. C. Fourney, H. G. P. Snyder, B. E. Franklin (from Union Carbide's New York Office), J. M. Ball, W. S. Porter, W. S. Akers, Jr. and G. L. Joseph. All four Nuclear Division plants were represented.